COMPREHENSIVE GROUND-WATER MONITORING EVALUATION

CME - 93

RAYMARK INDUSTRIES

PAD003015328

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TITLE:	**CME - 93**
FACILITY:	**RAYMARK INDUSTRIES**
ID #:	**PAD003015328**
COUNTY:	**Lancaster**
INSPECTOR:	**Thomas J. Miller/Gina R. Mason** **PADER Hydrogeologists**
INSPECTION DATE:	**10 AUG 93**
CONTACT:	**Raymark Industries** **Robert Moody (203)377-4616**

2.0 INTRODUCTION

The Raymark landfill is a captive facility owned and operated by Raymark Industries, Inc. The manufacturing plant and landfill are located in Manheim Borough, Lancaster Co., PA. Raymark's Manheim facility has been in operation for approximately seventy-five years producing materials for use in clutch, brake and other specialty friction applications. In 1988, a separate company, Raymark Friction took over the industrial processes at the facility, however the landfill and other SWMUs on the property are still the responsibility of Raymark Industries.

The landfill was permitted by the PADER on July 14, 1977 under Industrial Waste Permit Number 300628 even though it had been in operation reportedly since the 1940's. The landfill has been used for the disposal of off-specification products, binding agent wastes and dust collector fines from grinding and finishing operations. The latter waste, the dust collector fines is hazardous waste by virtue of its characteristic lead content in excess of 5.0 mg/l when subjected to the EP Tocixity Leaching Procedure [25 Pa Code, Chapter 75, Section 261.24(a)]. The waste in the landfill therefore is classified as Hazardous Waste #D008.

Currently inactive, the landfill occupies 10.5 acres of surface area and contains approximately 186,000 cubic yards of waste material. The facility is covered for the most part but not closed, in the manner required by RCRA.

3.0 REGULATORY HISTORY AND CURRENT STATUS

The Raymark landfill was permitted in the late 1970's by the PADER. The landfill had been operating for many years and permitting involved compliance with monitoring and operational as opposed to design requirements when the RCRA became effective in Pennsylvania. A Part B application was submitted to the Department on December 8, 1983, and a variance request was submitted in January of 1984. These documents claimed that fill onto existing ground was providing equivalent environmental protection to that of a double liner. Since the facility was already into a groundwater assessment program the Department determined that equivalent protection to the groundwater system was not being provided. By letter dated March 1, 1985, DER denied Raymark's Part B application and variance requests. The company was notified that a closure plan for the facility would be required.

A closure plan was submitted to the Department on April 24, 1987. This plan again requested variance from closure requirements for isolation distance to groundwater (even though this is not required by regulation), capping and cover requirements. A review letter dated September 23, 1987 was mailed to Raymark asking for a satisfactory response to deficiencies of the closure plan as identified in the review letter. The major deficiencies were:

1) An asphalt cap was proposed. 2) Waste material was below the regional water table.
3) Waste was disposed within the 100 year floodplain of Chickies Creek.

A revised Closure Plan was submitted to the Department in May 1990. This plan proposed the same basic approach as the 1987 plan except that waste was to be removed from the floodway of the creek. Raymark maintains that as a company, they are financially incapable of executing a landfill closure which would meet the requirements of RCRA. The landfill is inactive and most of the waste is covered by either a soil or asphalt cover to prevent removal by wind or water.

A consent order and adjudication was negotiated and signed by representatives of Raymark Industries, Raymark Corporation, Raymark Friction, Raytech Corporation and the PADER on March 11, 1991. Closure activities were to be started after approval of the revised (April 1992) 1991 closure and post-closure plan. This approval was granted on 2 Jul 92. To date there has been no discernible activity related to the closure at the Raymark Industries landfill in Manheim, PA.

Thousands of wooden pallets remain on the surface of the asphalt covered landfill and soil cover on the Eastern portion of the landfill has begun to erode (see photographs in Appendix C). Required permit applications for stream and wetland encroachments have not been received by the Department for review and approval. In short, Raymark (various corporate entities) has failed to take any substantive action which would result in implementation of the approved closure plan. Enforcement options are currently under review by Mr. Carl Schultz, Esq. of the Department's Office of Chief Counsel.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

MANHEIM QUADRANGLE
PENNSYLVANIA
7.5 MINUTE SERIES (TOPOGRAPHIC)

SOURCE

(1) Ordovician units compiled by Geyer based on:
(a) W 43.
(b) W 23.
(c) W 26.
(d) Unpublished senior field studies, Franklin and Marshall College

(2) Triassic from ms. map of D.B. McLaughlin on file at Pa. Geol. Survey, generalized for state map by Berg.

EXPLANATION

Rd
Diabase

Rh
Hammer Creek Fm

Rhc
Hammer Creek conglomerate

Rn
New Oxford Fm.

Rnc
New Oxford conglomerate

HAMBURG SEQUENCE

Oco
Cocalico Fm.

LEBANON VALLEY SEQUENCE

Ohm
Hershey and Myerstown Fms., undiv.

Oan
Annville Fm.

Oo
Ontelaunee Fm.

Oe
Epler Fm.

Os
Stonehenge Fm.

REFERENCES

Johnston, H. E. (1968), *Hydrology of the New Oxford Formation in Lancaster County, Pennsylvania*, Pennsylvania Geological Survey, 4th ser., Water Resource Report 23, 60 p.

Meisler, Harold, and Becher, A. E. (1971), *Hydrology of the carbonate rocks of the Lancaster 15' quadrangle, south-central Pennsylvania*, Pennsylvania Geological Survey, 4th ser., Water Resource Report 26, 149 p.

Poth, C. W. (1977), *Summary ground-water resources of Lancaster County, Pennsylvania*, Pennsylvania Geological Survey, 4th ser., Water Resource Report 43, 80 p.

SCALE 1:62500

CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

ROAD CLASSIFICATION

Heavy-duty — Light-duty
Medium-duty — Unimproved dirt
U.S. Route — State Route
Interstate Route

Compiled by A. R. GEYER and T. M. BERG, 1975-1976

MANHEIM

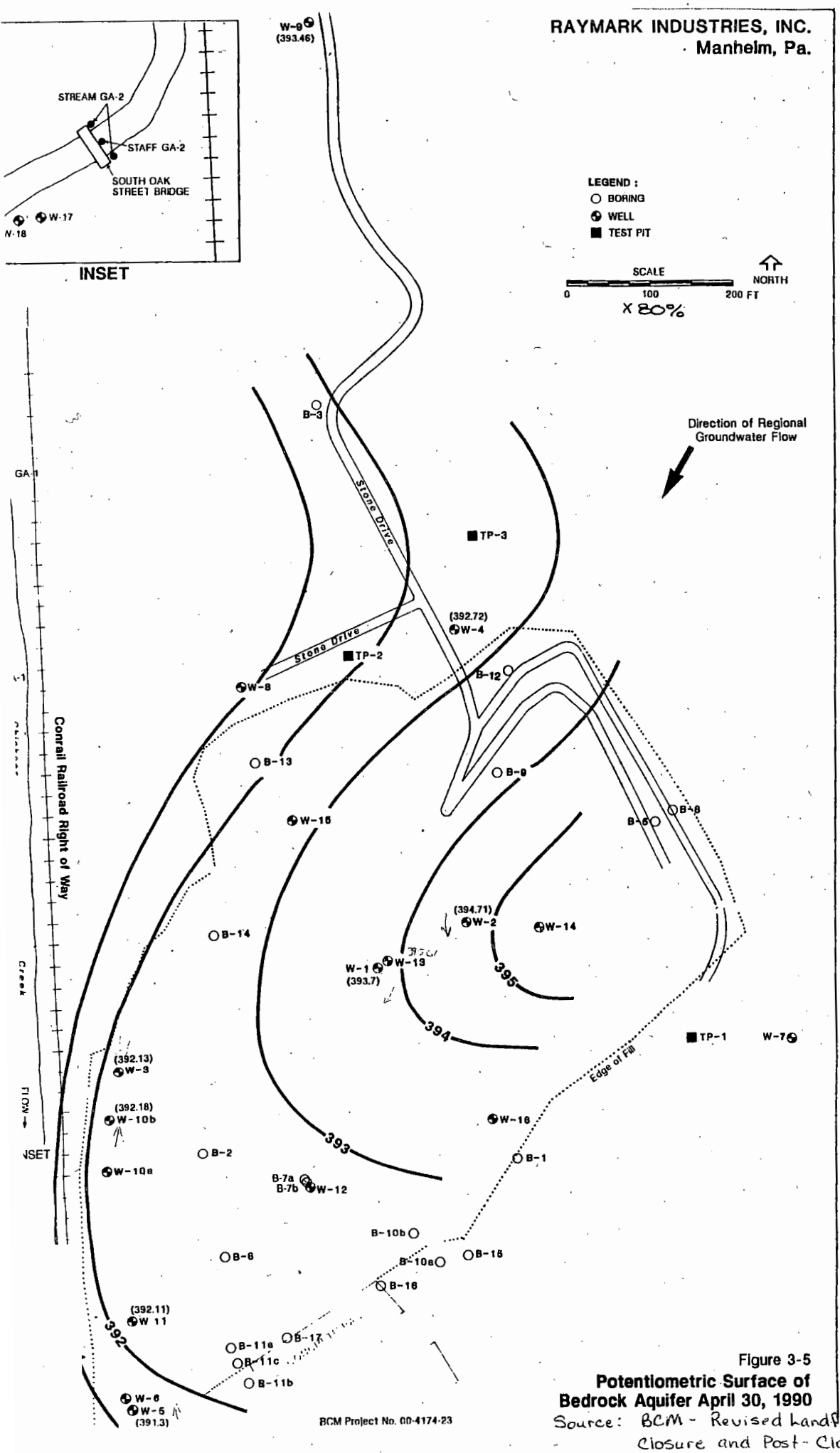

Figure 3-5
Potentiometric Surface of Bedrock Aquifer April 30, 1990

Source: BCM - Revised Landfill Closure and Post-Closure

5.0 GROUNDWATER SAMPLING DATA AND DISCUSSION

The groundwater quality has been monitored since the implementation of the interim status groundwater monitoring program in 1981. There are currently seven monitoring wells located on the Raymark site. The groundwater monitoring system for the facility is comprised of six downgradient wells: MW-3, MW-4, MW-6, MW-7, MW-10A, and MW-10B and one upgradient well, MW-9. The site-specific parameters include the general indicator parameters; pH, TOC, TOX, and Specific Conductance; CaCO3, TDS, Na, Na dis, Cl, SO4, Ba, Cu, Fe, Fe dis, Pb, Mn, Mn dis, and Phenols. Since the initiation of the groundwater monitoring program, the following parameters have been detected above background; SO4, TDS, and Specific Conductance.

On 10 Aug 93, DER conducted a split sampling event, as required to complete the CME. Seven monitoring wells were sampled; W-3, W-4, W-6, W-7, W-9, W-10A, and W-10B. As shown on the following tables, the sampling analysis data are within reasonable proximity to each other verifying the sampling techniques and data. The pattern of groundwater degradation established by previous sampling events persists. Lead is still not seen above background values in perimeter monitoring wells despite the apparent increase in indicator parameters.

6.0 RELEASE HISTORY

For over fifty years approximately 186,000 cubic yards of waste material, including dust collector fines, were deposited on a 10.5 acre unlined area. A portion of this area exists below the water table. Dust collector fines are considered a hazardous waste (D008) due to its characteristic lead content. Since 1987, the dust collector fines produced in Raymark's Manheim plant have been trucked off site. The landfill has still not been officially capped and/or closed.

7.0 SUMMARY

The Raymark Industries Manheim facility has not implemented its DER approved (modified 1991) Closure Plan. Waste is temporarily under soil cover but has not been capped and the soil cover is eroding in portions of the site (see photographs in Appendix C). Waste material is also within the floodway of the Chickies Creek and outside the landfill security fence. DER concludes however, that Raymark Industries is currently in compliance with applicable groundwater monitoring regulations.

Caywaste
CWIZ 193

APPENDIX A

COMPREHENSIVE GROUND-WATER MONITORING EVALUATION WORKSHEET

The following worksheets have been designed to assist the enforcement officer/ technical reviewer in evaluating theground-water monitoring system an owner/operator uses to collect and analyze samples of ground water. The focus of the worksheets is technical adequacy as it relates to obtaining and analyzing representative samples of ground water. The basis of the worksheets is the final RCRA Ground Water Monitoring Technical Enforcement Guidance Document which describes in detail the aspects of ground-water monitoring which EPA deems essential to meet the goals of RCRA. Appendix A is not a regulatory checklist. Specific technical deficiencies in the monitoring system can, however, be related to the regulations as illustrated in Figure 4.3 taken from the RCRA Ground-Water Monitoring Compliance Order Guide (COG) (included at the end of the appendix). The enforcement officer, in developing an enforcement order, should relate the technical assessment from the worksheets to the regulations using Figure 4.3 from the COG as a guide.

Comprehensive Ground-Water Monitoring Evaluation	Y/N
I. Office Evaluation Technical Evaluation of the Design of the Ground-Water Monitoring System	
A. Review of Relevant Documents	
1. What documents were obtained prior to conducting the inspection:	
a. RCRA Part A permit application?	N
b. RCRA Part B permit application?	N
c. Correspondence between the owner/operator and appropriate agencies or citizen's groups?	Y
d. Previously conducted facility inspection reports?	Y
e. Facility's contractor reports?	Y
f. Regional hydrogeologic, geologic, or soil reports?	Y
g. The facility's Sampling and Analysis Plan?	Y
h. Ground-water Assessment Program Outline (or Plan, if thefacility is in assessment monitoring)?	Y
i. Other (specify) Closure Plan, Consent Order Agreement	

	Y/N
B. Evaluation of the Owner/Operator's Hydrogeologic Assessment	
1. Did the owner/operator use the following direct techniques in the hydrogeologic assessment:	
a. Logs of the soil borings/rock corings (documented by a professional geologist, soil scientist, or geotechnical engineer)?	Y
b. Materials tests (e.g., grain size analyses, standard penetration tests, etc.)?	Y
c. Piezometer installation for water level measurments at different depths?d. Slug tests?	Y
e. Pump tests?	Y
i. Geochemical analyses of soil samples?	N
g. Other (specify) (e.g., hydrochemical diagrams and wash analysis)	
2. Did the owner/operator use the following indirect technique to supplement direct techniques data:	
a. Geophysical well logs?	N
b. Tracer studies?	N
c. Resistivity and/or electromagnetic conductance?	N
d. Seismic Survey?	N
e. Hydraulic conductivity measurements of cores?	N
f. Aerial photography?	N
g. Ground penetrating radar?	N
h. Other (specify)	N
3. Did the owner/operator document and present the raw data from the site hydrogeologic assessment?	Y
4. Did the owner/operator document methods (criteria) used to correlate and analyze the information?	Y
5. The owner/operator prepare the following:	
a. Narrative description of geology?	Y
b. Geologic cross sections?	Y
c. Geologic and soil maps?	Y
d. Boring/coring logs?	Y
e. Structure contour maps of the differing water bearing zones and confining layer?	N
f. Narrative description and calculation of ground-water flows?	Y

	Y/N
g. Water table/potentiometric map?	Y
h. Hydrologic cross sections?	Y
6. Did the owner/operator obtain a regional map of the area and delineate the facility?	Y
If yes, does this map illustrate: a. Surficial geology features?	Y
b. Streams, rivers, lakes, or wetlands near the facility?	Y
c. Discharging or recharging wells near the facility?	Y
7. Did the owner/operator obtain a regional hydrogeologic map?	Y
If yes, does this hydrogeologic map indicate: a. Major areas of recharge/discharge?	N
b. Regional ground-water flow direction?	Y
c. Potentiometric contours which are consistent with observed water level elevations?	Y
8. Did the owner/operator prepare a facility site map?	Y
If yes, does the site map show: a. Regulated units of the facility (e.g., landfill areas,impoundments)?	Y
b. Any seeps, springs, streams, ponds, or wetlands?	Y
c. Location of monitoring wells, soil borings, or test pits?	Y
d. How many regulated units does the facility have? 1	
If more than one regulated unit then, • Does the waste management area encompass all regulated units?	N/A
• Is a waste management area delineated for each regulated unit?	N/A
C. Characterization of Subsurface Geology of Site 1. Soil boring/test pit program:	Y
a. Were the soil borings/test pits performed under thesupervision of a qualified professional?	Y
b. Did the owner/operator provide documentation for selecting the spacing for borings?	Y
c. Were the borings drilled to the depth of the first confining unit below the uppermost zone of saturation or ten feet into bedrock?	Y
d. Indicate the method(s) of drilling: Auger, Air Percussion, rotary	

	Y/N
Auger (hollow or solid stem) ✓ Mud rotary ____ Reverse rotary ____ Cable tool ____ Jetting ____ Other (specify) ____	
e. Were continuous sample corings taken?	N
f. How were the samples obtained (checked method[s]) • Split spoon ✓ • Shelby tube, or similar ✓ • Rock coring ____ • Ditch sampling ____ • Other (explain) ____	
g. Were the continuous sample corings logged by a qualified professional in geology?	N/A
h. Does the field boring log include the following information:	
• Hole name/number?	Y
• Date started and finished?	Y
• Driller's name?	Y
• Hole location (i.e., map and elevation)?	Y
• Drill rig type and bit/auger size?	Y
◦ Gross petrography (e.g., rock type) of each geologic unit?	Y
• Gross mineralogy of each geologic unit?	Y
• Gross structural interpretation of each geologic unit and structural features (e.g., fractures, gouge material, solution channels, buried streams or valleys, identification of depositional material)?	N
• Development of soil zones and vertical extent and description of soil type?	Y
• Depth of water bearing unit(s) and vertical extent of each?	Y
• Depth and reason for termination of borehole?	Y
• Depth and location of any contaminant encountered in borehole?	Y
• Sample location/number?	Y
• Percent sample recovery?	N/A
• Narrative descriptions of: —Geologic observations?	N
—Drilling observations?	N
i. Were the following analytical tests performedon the core samples: • Mineralogy (e.g., microscopic tests and x-ray diffraction)?	N
• Petrographic analysis: —degree of crystallinity and cementation of matrix?	N
—degree of sorting, size fraction (i.e., sieving), textural variations?	N
—rock type(s)?	Y

	Y/N
—soil type?	Y
—approximate bulk geochemistry?	Y
—existence of microstructures that may effect or indicate fluid flow?	N
• Falling head tests?	N
• Static head tests?	Y
• Settling measurements?	N
• Centrifuge tests?	N
• Column drawings?	Y
D. Verification of Subsurface Geological Data	
1. Has the owner/operator used indirect geophysical methods to supplement geological conditions between borehole locations?	N
2. Do the number of borings and analytical data indicate that the confining layer displays a low enough permeability to impede the migration of contaminants to any stratigraphically low water-bearing units?	N
3. Is the confining layer laterally continuous across the entire site?	N
4. Did the owner/operator consider the chemical compatibility of the site-specific waste types and the geologic materials of the confining layer?	Y
5. Did the geologic assessment address or provide means for resolution of any information gaps of geologic data?	N
6. Do the laboratory data corroborate the field data for petrography?	N/A
7. Do the laboratory data corroborate the field data for mineralogy and subsurface geochemistry?	N
E. Presentation of Geologic Data	
1. Did the owner/operator present geologic cross sections of the site?	Y
2. Do cross sections:	
a. identify the types and characteristics of the geologic materials present?	Y
b. define the contact zones between different geologic materials?	N
c. note the zones of high permeability or fracture?	N
d. give detailed borehole information including:	

	Y/N
• location of borehole?	Y
• depth of termination?	Y
• location of screen (if applicable)?	Y
• depth of zone(s) of saturation?	Y
• backfill procedure?	Y
3. Did the owner/operator provide a topographic map which was constructed by a licensed surveyor?	Y
4. Does the topographic map provide:	
a. contours at a maximum interval of two-feet?	N
b. locations and illustrations of man-made features (e.g., parking lots, factory buildings, drainage ditches, storm drain, pipelines, etc.)?	Y
c. descriptions of nearby water bodies?	N
d. descriptions of off-site wells?	N
e. site boundaries?	Y
f. individual RCRA units?	N
g. delineation of the waste management area(s)?	Y
h. well and boring locations?	Y
5. Did the owner/operator provide an aerial photograph depicting the site and adjacent off-site features?	N
6. Does the photograph clearly show surface water bodies, adjacent municipalities, and residences and are these clearly labelled?	N
F. Identification of Ground-Water Flowpaths	
1. Ground-water flow direction	
a. Was the well casing height measured by a licensed surveyor to the nearest 0.01 feet?	Y
b. Were the well water level measurements taken within a 24 hour period?	Y
c. Were the well water level measurements taken to the nearest 0.01 feet?	Y
d. Were the well water levels allowed to stabilize after construction and development for a minimum of 24 hours prior to measurements?	Y
e. Was the water level information obtained from (check appropriate one):	
• multiple piezometers placed in single borehole?	___
• vertically nested piezometers in closely spaced separate	✓
• boreholes?	✓
• monitoring wells?	✓

	Y/N
f. Did the owner/operator provide construction details for the piezometers?	Y
g. How were the static water levels measured (check method[s]). • Electric water sounder ✓ • Wetted tape ___ • Air line ___ • Other (explain) ___	
h. Was the well water level measured in wells with equivalent screened intervals at an equivalent depth below the saturated zone?	Y
i. Has the owner/operator provided a site water table (potentiometric) contour map?	Y
If yes, • Do the potentiometric contours appear logical and accurate based on topography and presented data? (Consult water level data)	Y
• Are ground-water flow-lines indicated?	N
• Are static water levels shown?	Y
• Can hydraulic gradients be estimated?	Y
j. Did the owner/operator develop hydrologic cross sections of the vertical flow component across the site using measurements from all wells?	N
k. Do the owner/operator's flow nets include: • piezometer locations?	Y
• depth of screening?	Y
◦ width of screening?	Y
• measurements of water levels from all wells and piezometers?	Y
2. Seasonal and temporal fluctuations in ground-water	
a. Do fluctuations in static water levels occur? If yes, are the fluctuations caused by any of the following:	Y
—Off-site well pumping	Y
—Tidal processes or other intermittent natural variations (e.g., river stage, etc.)	Y
—On-site well pumping	N
—Off-site, on-site construction or changing land use patterns	N
—Deep well injection	N
—Seasonal variations	Y
—Other (specify) ___	
b. Has the owner/operator documented sources and patterns that contribute to or affect the ground-water patterns below the waste management?	Y
c. Do water level fluctuations alter the general ground-water gradients and flow directions?	N
d. Based on water level data, do any head differentials occur that may indicate a vertical flow component in the saturated zone?	Y

	Y/N
e. Did the owner/operator implement means for gauging long term effects on water movement that may result from on-site or off-site construction or changes in land-use patterns?	N
3. Hydraulic conductivity a. How were hydraulic conductivities of the subsurface materials determined?	
• Single-well tests (slug tests)?	Y
• Multiple-well tests (pump tests)	Y
• Other (specify) _____	
b. If single-well tests were conducted, was it done by: • Adding or removing a known volume of water?	Y
• Pressurizing well casing?	N
c. If single well tests were conducted in a highly permeable formation, were pressure transducers and high-speed recording equipment used to record the rapidly changing water levels?	N
d. Since single well tests only measure hydraulic conductivity in a limited area, were enough tests run to ensure a representative measure of conductivity in each hydrogeologic unit?	N
e. Is the owner/operator's slug test data (if applicable) consistent with existing geologic information (e.g., boring logs)?	Y
f. Were other hydraulic conductivity properties determined?	
g. If yes, provide any of the following data, if available: • Transmissivity ____ • Storage coefficient ____ • Leakage ____ • Permeability 2.5 – 3.5×10^{-3} cm/sec • Porosity ____ • Specific capacity ____ • Other (specify) _____	
4. Identification of the uppermost aquifer a. Has the extent of the uppermost saturated zone (aquifer) in the facility area been defined? If yes,	
• Are soil boring/test pit logs included?	Y
• Are geologic cross-sections included?	Y
b. Is there evidence of confining (competent, unfractured, continuous, and low permeability) layers beneath the site? If yes,	N
• how was continuity demonstrated? borings show discontinuous clay	
c. What is hydraulic conductivity of the confining unit (if present)? CM/Sec How was it determined?	N/A

	Y/N
• What are the dimensions of the filter pack? _____	?
• Has a turbidity measurement of the well water ever been made?	Y
• Have the filter pack and screen been designed for the insitu materials? _____	?
c. Well development	
• Was the well developed?	Y
• What technique was used for well development?	
—Surge block	
—Bailer	
—Air surging	
—Water pumping	
—Other (specify) _____	
4. Annular Space Seals	
a. What is the annular space in the saturated zone directlyabove the filter pack filled with:	
—Sodium bentonite (specify type and grit)	
—Cement (specify neat or concrete)	
—Other (specify) Formation Material or Portland Cement and Bentonite	
b. Was the seal installed by:	
—Dropping material down the hole and tamping	
—Dropping material down the inside of hollow-stem auger	
—Tremie pipe method	
—Other (specify) shovel	
c. Was a different seal used in the unsaturated zone? If yes,	N
• Was this seal made with?	
—Sodium bentonite (specify type and grit)	
—Cement (specify neat or concrete)- Other (specify)	N/A
◦ Was this seal installed by?	
—Dropping material down the hole and tamping	
—Dropping material down the inside of hollow stem auger	
—Other (specify)	N/A
d. Is the upper portion of the borehole sealed with a concrete cap to prevent infiltration from the surface?	Y
e. Is the well fitted with an above-ground protectivedevice and bumper guards?	Y
f. Has the protective cover been installed with locks to prevent tampering?	Y

	Y/N
H. Evaluation of the Facility's Detection Monitoring Program	
1. Placement of Downgradient Detection Monitoring Wells	
a. Are the ground-water monitoring wells or clusters located immediately adjacent to the waste management area?	Y
b. How far apart are the detection monitoring wells? 80 - 500'	
c. Does the owner/operator provide a rationale for thelocation of each monitoring well or cluster?	Y
d. Does the owner/operator identified the well screenlengths of each monitoring well or clusters?	Y
e. Does the owner/operator provide an explanation for the well screen lengths of each monitoring well orcluster?	N
f. Do the actual locations of monitoring wells orclusters correspond to those identified by the owner/operator?	Y
2. Placement of Upgradient Monitoring Wells	
a. Has the owner/operator documented the location ofeach upgradient monitoring well or cluster?	Y
b. Does the owner/operator provide an explanation forthe location(s) of the upgradient monitoring wells?	Y
c. What length screen has the owner/operator employed inthe background monitoring well(s)?	14.5'
d. Does the owner/operator provide an explanation for the screen length(s) chosen?	N
e. Does the actual location of each background monitoring well or cluster correspond to that identified by the owner/operator?	Y
Office Evaluation of the Facility's Assessment Monitoring Program	
1. Does the assessment plan specify: Assessment Plan has been supplemented by Closure Plan	
a. The number, location, and depth of wells?	Y
b. The rationale for their placement and identify the basis that will be used to select subsequent sampling locations and depths in later assessment phases?	Y
2. Does the list of monitoring parameters include all hazardous waste constituents from the facility? Appendix IX analysis has been conducted at 4 wells on the facility.	

	Y/N
a. Does the water quality parameter list include other important indicators not classified as hazardous waste constituents?	Y
b. Does the owner/operator provide documentation for he listed wastes which are not included?	Y
3. Does the owner/operator's assessment plan specify the procedures to be used to determine the rate of constituent migration in the ground-water?	Y
4. Has the owner/operator specified a schedule of implementation in the assessment plan?	Y
5. Have the assessment monitoring objectives been clearly defined in the assessment plan?	Y
a. Does the plan include analysis and/or re-evaluation to determine if significant contamination has occurredin any of the detection monitoring wells?	Y
b. Does the plan provide for a comprehensive program of investigation to fully characterize the rate and extent of contaminant migration from the facility?	Y
c. Does the plan call for determining the concentrations of hazardous wastes and hazardous waste constituentsin the ground water?	Y
d. Does the plan employ a quarterly monitoring program?	Y
6. Does the assessment plan identify the investigatory methods that will be used in the assessment phase?	Y
a. Is the role of each method in the evaluation fully described?	N
b. Does the plan provide sufficient descriptions of the direct methods to be used?	Y
c. Does the plan provide sufficient descriptions of the indirect methods to be used?	Y
d. Will the method contribute to the further characterization of the contaminant movement?	Y
7. Are the investigatory techniques utilized in the assessment program based on direct methods?	Y
a. Does the assessment approach incorporate indirect methods to further support direct methods?	N
b. Will the planned methods called for in the assessment approach ultimately meet performance standards for assessment monitoring?	Y
c. Are the procedures well defined?	Y
d. Does the approach provide for monitoring wells similar in design and construction as the detectionmonitoring wells?	Y

	Y/N
e. Does the approach employ taking samples during drilling or collecting core samples for further analysis?	N
8. Are the indirect methods to be used based on reliable and accepted geophysical techniques?	N
a. Are they capable of detecting subsurface changesresulting from contaminant migration at the site?	N/A
b. Is the measurement at an appropriate level of sensitivity to detect ground-water quality changes at the site?	N/A
c. Is the method appropriate considering the nature of the subsurface materials?	N/A
d. Does the approach consider the limitations of these methods?	N/A
e. Will the extent of contamination and constituent concentration be based on direct methods and sound engineering judgment? (Using indirect methods tofurther substantiate the findings.)	Y
9. Does the assessment approach incorporate any mathe-matical modeling to predict contaminant movement?	N
a. Will site specific measurements be utilized toaccurately portray the subsurface?	N
b. Will the derived data be reliable?	Y
c. Have the assumptions been identified?	Y
d. Have the physical and chemical properties of the site-specific wastes and hazardous waste constituentsbeen identified?	Y
J. Conclusions	
1. Subsurface geology	
a. Has sufficient data been collected to adequately define petrography and petrographic variation?	N
b. Has the subsurface geochemistry been adequately defined?	N
c. Was the boring/coring program adequate to definesubsurface geologic variation?	N
d. Was the owner/operator's narrative description complete and accurate in its interpretation of the data?	N
e. Does the geologic assessment address or provide means to resolve any information gaps?	N
2. Ground-water flowpaths	
a. Did the owner/operator adequately establish the hori-zontal and vertical components of ground-water flow?	N

	Y/N
b. Were appropriate methods used to establish ground-water flowpaths?	Y
c. Did the owner/operator provide accurate documentation?	Y
d. Are the potentiometric surface measurements valid?	Y
e. Did the owner/operator adequately consider the seasonal and temporal effects on the ground-water?	N
f. Were sufficient hydraulic conductivity tests performed to document lateral and vertical variationin hydraulic conductivity in the entire hydrogeologic subsurface below the site?	N
3. Uppermost Aquifer a. Did the owner/operator adequately define the upper-most aquifer?	Y
4. Monitoring Well Construction and Design a. Do the design and construction of the owner/operator's ground-water monitoring wells permit depth discrete ground-water samples to be taken?	Y
b. Are the samples representative of ground-water quality?	Y
c. Are the ground-water monitoring wells structurally stable?	Y
d. Does the ground-water monitoring well's design and construction permit an accurate assessment of aquifer characteristics?	Y
5. Detection Monitoring a. Downgradient Wells • Do the location, and screen lengths of the ground-water monitoring wells or clusters in the detection monitoring system allow the immediate detection of a release of hazardous waste or constituents from the hazardous waste management area to the uppermost aquifer?	Y
b. Upgradient Wells • Do the location and screen lengths of the upgradient (background) ground-water monitoring wells ensure the capability of collecting ground-water samples representative of upgradient (background) ground-water quality including any ambient heterogenous chemical characteristics?	Y
6. Assessment Monitoring a. Has the owner/operator adequately characterized site hydrogeology to determine contaminant migration?	N
b. Is the detection monitoring system adequately designed and constructed to immediately detect any contaminant release?	N

	Y/N
c. Are the procedures used to make a first determinationof contamination adequate?	Y
d. Is the assessment plan adequate to detect, characterize, and track contaminant migration?	Y
e. Will the assessment monitoring wells, given site hydrogeologic conditions, define the extent and concentration of contamination in the horizontal and vertical planes?	N
f. Are the assessment monitoring wells adequately designed and constructed?	Y
g. Are the sampling and analysis procedures adequate to provide true measures of contamination?	Y
h. Do the procedures used for evaluation of assessment monitoring data result in determinations of the rate of migration, extent of migration, and hazardous constituent composition of the contaminant plume?	N
i. Are the data collected at sufficient frequency and duration to adequately determine the rate of migration?	N
j. Is the schedule of implementation adequate?	Y
k. Is the owner/operator's assessment monitoring plan adequate?	Y
• If the owner/operator had to implement hisassessment monitoring plan, was it implemented satisfactorily?	Y

II. Field Evaluation

A. Ground-Water Monitoring System

1. Are the numbers, depths, and locations of monitoring wells in agreement with those reported in the facility's monitoring plan? (See Section 3.2.3.) — Y

B. Monitoring Well Construction

1. Identify construction material material diameter

	Wells 9 & 10A
a. Primary Casing steel	4" PVC
b. Secondary or outside casing N/A	steel

2. Is the upper portion of the borehole sealed with conrete to prevent infiltration from the surface? — Y

3. Is the well fitted with an above-ground protective device? — Y

4. Is the protective cover fitted with locks to prevent tampering? If a facility utilizes more than a single well design, answer the above questions for each well design? — Y

	Y/N
III. Review of Sample Collection Procedures	
A. Measurement of Well Depths /Elevation	
1. Are measurements of both depth to standing water and depth to the bottom of the well made?	Y
2. Are measurements taken to the 0.01 feet?	Y
3. What device is used? water level probe (electric)	
4. Is there a reference point established by a licensed surveyor?	Y
5. Is the measuring equipment properly cleaned betweenwll locations to prevent cross contamination?	Y
B. Detection of Immiscible Layers	
1. Are procedures used which will detect light phase immiscible layers?	N
2. Are procedures used which will detect heavy phase immiscible layers?	N
C. Sampling of Immiscible Layers	
1. Are the immiscible layers sampled separately prior to well evacuation?	N
2. Do the procedures used minimize mixing with watersoluble phases?	N
D. Well Evacuation	
1. Are low yielding wells evacuated to dryness?	Y
2. Are high yielding wells evacuated so that at least three casing volumes are removed?	Y
3. What device is used to evacuate the wells? dedicated submersible pumps peristaltic pump well #10A	
4. If any problems are encountered (e.g., equipmentmalfunction) are they noted in a field logbook?	Y

	Y/N
E. Sample Withdrawal	
1. For low yielding wells, are samples for volatiles, pH, and oxidation/reduction potential drawn first after the well recovers?	Y* (no ORP)
2. Are samples withdrawn with either flurocarbon/resins or stainless steel (316, 304 or 2205) sampling devices?	Y
3. Are sampling devices either bottom valve bailers or positive gas displacement bladder pumps?	N
4. If bailers are used, is fluorocarbon/resin coated wire, single strand stainless steel wire, or monofilament used to raise and lower the bailer?	N/A
5. If bladder pumps are used, are they operated in acontinuous manner to prevent aeration of the sample?	N/A
6. If bailers are used, are they lowered slowly to prevent degassing of the water?	Y
7. If bailers are used, are the contents transferred to the sample container in a way that minimizes agitation and aeration?	Y
8. Is care taken to avoid placing clean sampling equipment on the ground or other contaminated surfaces prior to insertion into the well?	Y
9. If dedicated sampling equipment is not used, is equipment disassembled and thoroughly cleaned between samples?	Y
10. If samples are for inorganic analysis, does the cleaning procedure include the following sequential steps: a. Dilute acid rinse (HNO_3 or HC1)?11. ~~If samples are for organic analysis, does the cleaning procedure include the following sequential steps:~~	Y
11. If samples are for inorganic analysis, does the cleaning procedure include the following sequential steps: a. Nonphosphate detergent wash?	Y
b. Tap water rinse?	Y
c. Distilled/deionized water rinse?	N
d. Acetone rinse?	N
e. Pesticide-grade hexane rinse?	N

	Y/N
12. Is sampling equipment thoroughly dry before use?	Y
13. Are equipment blanks taken to ensure that sample cross-contamination has not occurred?	Y
14. If volatile samples are taken with a positive gas displacement bladder pump, are pumping rates below 100 ml/min?	N/A
F. In-situ or Field Analyses	
1. Are the following labile (chemically unstable) parameters determined in the field:	
a. pH?	Y
b. Temperature?	Y
c. Specific conductivity?	Y
d. Redox potential?	N
e. Chlorine?	N
f. Dissolved oxygen?	N
g. Turbidity?	N
h. Other (specify) _____	
2. For in-situ determinations, are they made after well evacuation and sample removal?	N
3. If sample is withdrawn from the well, is parameter measured from a split portion?	Y
4. Is monitoring equipment calibrated according to mannufacturers' specifications and consistent with SW-846?	?
5. Is the date, procedure, and maintenance for equipment calibration documented in the field logbook?	Y
IV. Review of Sample Preservation and Handling Procedures	
A. Sample Containers	
1. Are samples transferred from the sampling device directly to their compatible containers? except for filtered metals which go to a filter barrel first	Y

	Y/N
2. Are sample containers for metals (inorganics) analyses polyethylene with polypropylene caps?	Y
3. Are sample containers for organics analysis glass bottles with fluorocarbonresin-lined caps?	Y
4. If glass bottles are used for metals samples are the caps fluorocarbonresin-lined?	N/A
5. Are the sample containers for metal analyses cleanedusing these sequential steps:	
a. Nonphosphate detergent wash?	?
b. 1:1 nitric acid rinse?	
c. Tap water rinse?	
d. 1:1 hydrochloric acid rinse?	
e. Tap water rinse?	
f. Distilled/deionized water rinse?	
6. Are the sample containers for organic analyses cleaned using these sequential steps:	
a. Nonphosphate detergent/hot water wash?	?
b. Tap water rinse?	
c. Distilled/deionized water rinse?	
d. Acetone rinse?	
e. Pesticide-grade hexane rinse?	
7. Are trip blanks used for each sample container type to verify cleanliness?	
B. Sample Preservation Procedures	
1. Are samples for the following analyses cooled to 4°C: (samples were analyzed for selected list of parameters (see attached laboratory data.)	
a. TOC?	N/A
b. TOX?	I
c. Chloride?	Y
d. Phenols?	N/A
e. Sulfate?	Y
f. Nitrate?	N/A
g. Coliform bacteria?	
h. Cyanide?	
i. Oil and grease?	
j. Hazardous constituents ()261, Appendix VIII)?	

	Y/N
2. Are samples for the following analyses field acidified to pH <2 with HNO_3:	
a. Iron?	Y
b. Manganese?	Y
c. Sodium?	Y
d. Total metals?	Y
e. Dissolved metals?	Y
f. Fluoride?	N/A
g. Endrin?	
h. Lindane?	
i. Methoxychlor?	
j. Toxaphene?	
k. 2,4, D?	
l. 2,4,5 TP Silvex?	
m. Radium?	
n. Gross alpha?	
o. Gross beta?	
3. Are samples for the following analyses field acidfied to pH <2 with H_2SO_4:	
a. Phenols?	Y
b. Oil and grease?	N/A
4. Is the sample for TOC analyses field acified to pH <2 with HCl?	Y
5. Is the sample for TOX analysis preserved with 1 ml of 1.1 M sodium sulfite?	N
6. Is the sample for cyanide analysis preserved with NaOH to pH >12?	N/A
C. Special Handling Considerations	
1. Are organic samples handled without filtering?	Y
2. Are samples for volatile organics transfered to the appropriate vials to eliminate headspace over the sample?	Y
3. Are samples for metal analysis split into two portions?	Y
4. Is the sample for dissolved metals filtered through a 0.45 micron filter?	Y
5. Is the second portion not filtered and analyzed for total metals?	Y
6. Is one equipment blank prepared each day of ground-water sampling?	Y

	Y/N
V. Review of Chain-of-Custody Procedures	
A. Sample Labels	
1. Are sample labels used?	Y
2. Do they provide the following information:	
a. Sample identification number?	Y
b. Name of collector?	Y
c. Date and time of collection?	Y
d. Place of collection?	Y
e. Parameter(s) requested and preservitives used?	Y
3. Do they remain legible even if wet?	Y
B. Sample Seals both sampling crews personally maintained chain-of-custody and delivered samples to their respective laboratories.	
1. Are sample seals placed on those containers to ensure samples are not altered?	N
C. Field Logbook	
1. Is a field logbook maintained?	Y
2. Does it document the following:	
a. Purpose of sampling (e.g., detection or assesment)?	~~N~~ N
b. Location of well(s)?	N
c. Total depth of each well?	N
d. Static water level depth and measurement technique?	Y
e. Presence of immiscible layers and detection method?	N
f. Collection method for immiscible layers and sample identification numbers?	N
g. Well evacuation procedures?	Y
h. Sample withdrawal procedure?	Y
i. Date and time of collection?	Y
j. Well sampling sequence?	Y
k. Types of sample containers and sample identification number(s)?	Y
l. Preservative(s) used?	Y
m. Parameters requested?	Y
n. Field analysis data and method(s)?	Y
o. Sample distribution and transporter?	Y
p. Field observations?	Y

	Y/N
—Unusual well recharge rates?	ע
—Equipment malfunction(s)?	ע
—Possible sample contamination?	ע
—Sampling rate?	ע
D. Chain-of-Custody Record	
1. Is a chain-of-custody record included with each sample?	ע
2. Does it document the following:	
a. Sample number?	ע
b. Signiture of collector?	ע
c. Date and time of collection?	ע
d. Sample type?	ע
e. Station location?	ע
f. Number of containers?	ע
g. Parameters requested?	ע
h. Signatures of persons involved in chain-of-custody?	ע
i. Inclusive dates of custody?	ע
E. Sample Analysis Request Sheet	
1. Does a sample analysis request sheet accompany each sample?	א
2. Does the request sheet document the following:	
a. Name of person receiving the sample?	ע
b. Date of sample receipt?	ע
c. Duplicates?	ע
d. Analysis to be performed?	ע
IV. Review of Quality Assurance/Quality Control	
A. Is the validity and reliability of the laboratory and field generated data ensured by a QA/QC program?	ע
B. Does the QA/QC program include:	
1. Documentation of any deviation from approved procedures?	ע

	Y/N
2. Documentation of analytical results for:	
a. Blanks?	Y
b. Standards?	Y
c. Duplicates?	Y
d. Spiked samples?	Y
e. Detectable limits for each parameter being analyzed?	Y
C. Are approved statistical methods used?	Y
D. Are QC samples used to correct data?	N/A
E. Are all data critically examined to ensure it has been properly calculated and reported?	?
VII. Surficial Well Inspection and Field Observation	
A. Are the wells adequately maintained?	Y
B. Are the monitoring wells protected and secure?	Y
C. Do the wells have surveyed casing elevations?	Y
D. Are the ground-water samples turbid? same	Y
E. Have all physical characteristics of the site been noted in the inspector's field notes (i.e., surface waters, topography, surface features)?	Y
F. Has a site sketch been prepared by the field inspector with scale, north arrow, location(s) of buildings, location(s) of regulated units, locations of monitoring wells, and a rough depiction of the site drainage pattern?	N

	Y/N
VIII. Conclusions	
A. Is the facilitycurrently operating under the correct monitoring progaram according to the statistical analyses performed by the current operator?	٢
B. Does the ground-water monitoring system, as designed and operated, allow for detection or assessment of any possible ground-water contamination caused by the facility?	٢
C. Does the sampling and analysis procedures permit the owner/operator to detect and, where possible, assess the nature and extent of a release of hazardous constituents to ground water from the monitored hazardous waste management facility?	٢

Universal Friction T

ER-WM-306: Rev. 11/93

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WASTE MANAGEMENT

HAZARDOUS WASTE INSPECTION REPORT
TSD FACILITIES - LANDFILLS

Site Name Raymark Friction ID Number PAD003015328 Date 03/16/94

1-No Violation Observed 2-Not-Applicable 3-Not-Determined 4-Non-Compliance

STATUS 1	2	3	4	REQUIREMENT	CHAPTER CITATION	LINE NUMBER
X				Run-on diverted away from the facility	265.302(a)(1)	H425
			X	Run-off collection system properly designed, constructed, operated and maintained	265.302(a)(2)	H426
		X		Run-off collected from the active portions and managed as a hazardous waste if it is a hazardous waste	265.302(a)(2)	H427
			X	Facility is managed to prevent wind dispersal of hazardous waste	265.302(a)(4)	H428
		X		The exact location and dimension, including depth of each cell with respect to permanently surveyed benchmarks kept on map in operating record	265.309(1)	H429
		X		The contents of each cell and the approximate location of each hazardous waste type within each cell kept in operating record	265.309(2)	H430
			X	Closure and post-closure requirements complied with	265.310	H431
		X		Ignitable and reactive wastes disposed with Department approval	265.312	H432
		X		Precautions taken for the disposal of incompatible wastes and materials	265.313	H433
		X		Hazardous wastes disposed contain greater than 20% solids content by dry weight, are not flowable and do not contain free liquid	265.314	H434
		X		Empty containers crushed flat, shredded or similarly reduced in volume before disposal	265.315	H435

e name : Raymark Friction
Number : PAD003015328
e : 08/16/1994

Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Waste Management

Inspection Report Comments

On Aug. 16, 1994, Tony Rathfon, Randy Weiss and Myself conducted a routine inspection of the facility's old hazardous waste ndfill with Projects Development Engineer, Jamie Showers. There are three main sections of the landfill. The center portion is largest section and is capped with macadam. The portion adjacent to the railroad tracks was exposed. Old parts were ctly exposed to the surface. The third section is located on the opposite side of the center section. This section of the landfill capped with clay and vegetated. Evidence of erosion of waste from the landfill being transported down gradient was visible.

The Department has approved the closure plan submitted by Raymark. (Letter attached) Furthermore, bankruptcy court has cated funds for closure.

COMMENDATIONS:

) Implement closure activities as per Raymark's approved plan.

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the "Requirement" Section of this inspection report, each listed inspection item may provide only a brief version of its corresponding obligation as described in the of the regulations. Please use the Chapter citations listed on this inspection report as a reference to obtain a detailed description of compliance requirements. is inspection report is official notification that a representative of the Department of Environmental Resources, Waste Management Program, inspected the installation. The findings of this inspection are shown in this report. This inspection report shall serve a formal notification of any violations which were observed the inspection. Violations may also be discovered upon examination of the results of laboratory analyses and review of Department records. Additional ation may be forthcoming, concerning any violations indicated herein and listing any additional violations.
his report does not constitute an order or other appealable action of the Department. Nothing contained herein shall be deemed to grant or imply immunity from action for any violation noted herein.
gnature by the person interviewed does not necessarily imply concurrence with the findings on this report, but does acknowledge that the person was shown the or that a copy was left with the person.

---

n Interviewed (Signature) Mailed Date 09/15/94

ctor (Signature) James Brashear Date 09/15/94

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
Office of Chief Counsel
Central Region Litigation
301 Chestnut Street - Third Floor
Harrisburg, PA 17101-2702
Telephone: (717) 787-8790
Fax: (717) 783-4541

July 2, 1992

Brendan K. Collins, Esq.
Ballard, Spahr, Andrews & Ingersoll
1735 Market Street, 51st Floor
Philadelphia, PA 19103-7599

RE: Raymark

Dear Brendan:

The Department has reviewed the revised 1991 Closure Plan submitted by Raymark in April of this year. We have determined that the revised 1991 Closure Plan satisfies the requirements of the March 19, 1991 Consent Order and Adjudication between the Department and the Raymark companies. For the record, although it is not expressly stated in the amended plan in part 6.3.2.3, it is our understanding that the reference in that section to a 200 ppm threshold level for post excavation sampling refers to 200 ppm total lead.

Pursuant to paragraph 5 of the Consent Order and Adjudication, Raymark is now required to move in bankruptcy court for authorization to implement the Closure Plan. I have already discussed with Ms. Dlutowski of your firm the appropriate language for the motion to the bankruptcy court. I would, however, appreciate seeing a final draft of the motion before it is filed. Given that much remains to be done before actual implementation of the Closure Plan, we would like to move forward in bankruptcy court as quickly as possible. If you anticipate any difficulty in filing an appropriate motion by July 15, please let me know. I look forward to hearing from you.

Sincerely,

Carl B. Schultz
Assistant Counsel

CBS:mbr

cc: Bob Benvin
Tom Miller
Joe Sebzda

TABLE 1
RAYMARK INDUSTRIES
QUARTERLY GROUNDWATER ANALYTICAL RESULTS
THIRD QUARTER 1993
8/10/93

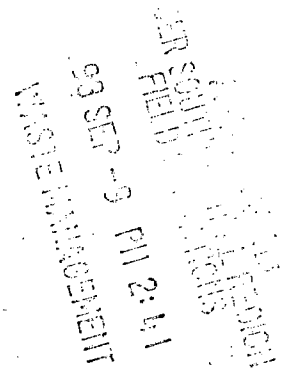
SAMPLING LOCATION:		W-3	W-4	W-6	W-7	W-9	W-10A	W-10B
SAMPLING DATE :		8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93	8/10/93
BCM SAMPLE NUMBER:		318732	31874	31876	318738	318740	318742	318744
		318733	31875	31877	31879	318741	318743	318745
PARAMETER								
WATER TABLE ELEVATION *		389.99	391.16	385.76	390.90	392.25	389.96	389.96
Total Organic Carbon	mg/l	NT	NT	NT	NT	NT	NT	NT
Total Organic Halides	ug/l	NT	NT	NT	NT	NT	NT	NT
INDICATOR PARAMETERS								
pH (Field)	std. units	7.32	7.14	7.03	7.26	7.26	6.9	7.53
Specific Conductance	umhos	2400	1100	1900	780	520	2600	2400
QUALITY PARAMETERS								
Chloride	mg/l	60.6	27.2	7.97	11.5	35.0	13.8	12.0
Sodium	mg/l	288	44.3	5.92	7.87	11.5	19.9	32.8
Sulfate as SO4	mg/l	960	136	1050	64.4	34.1	1160	687
Total Dissolved Solids	mg/l	3060	715	1800	491	318	2470	2010
ADDITIONAL PARAMETERS								
Alkalinity pH	mg/l	7.78	8.09	7.88	8.07	8.03	8.06	8.02
Bicarbonate Alkalinity as CaCO3	mg/l	1800	316	266	284	194	578	990
Carbonate Alkalinity as CaCO3	mg/l	0	0	0	0	0	0	0
Free Carbon Dioxide	mg/l	61	5	7	7	5	10	19
Hydroxide Alkalinity as CaCO3	mg/l	0	0	0	0	0	0	0
P Alkalinity as CaCO3	mg/l	0	0	0	0	0	0	0
Total Alkalinity as CaCO3	mg/l	1800	316	266	284	194	578	990
Lead	mg/l	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

*-GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL - WATER TABLE ELEVATION IN WELL #8 = 391.13'
NT-NOT TESTED AS PART OF THIS STUDY.
SOURCE: BCM ENGINEERS INC. (BCM PROJECT NO. 00-4174-36)

DEPARTMENT OF ENVIRONMENTAL RESOURCES

LABORATORY REPORT — RECEIVED 8/11/93
FOR SAMPLE NUMBER H9347791 — REPORTED 9/09/93

COLLECTOR	TOM MILLER SWM3	SAMPLING DATE	8/10/93
COLLECTOR NO.	2310338	SAMPLING TIME	11:30
ESTABLISHMENT	RAYMARK	STANDARD ANAL	236
CASE NAME	CME-93	TYPE CODE	
FACILITY	[redacted]	WQN	
ID CODE		STREAM CODE	
		RIVER MILE IND	



TEST	DESCRIPTION	RESULT	CONC	VERIFY	BY	VERIFY DATE
00095	SPEC CONDUCT	3980.0000		G	MRD	8/12/93
00403	PH LAB	7.4000		G	HWS	8/11/93
00410	T ALK CACO3	1858.0000	MG/L	G	HWS	8/11/93
00515	RES DISS/105	3232.0000	MG/L	G	DHN	8/18/93
00680	C TOT ORGANC	31.1000	MG/L	G	WVM	8/12/93
00929A	NA	436.0000	MG/L	G	REW	8/18/93
00930A	NA DISS	275.0000	MG/L	G	REW	9/08/93
00940	CL	60.9000	MG/L	G	WVM	8/12/93
00945	SO4 TOTAL	838.0000	MG/L	G	WVM	8/12/93
01007A	BA	182.0000	UG/L	G	REW	8/13/93
01042A	CU TOT	< 10.0000	UG/L	G	REW	8/13/93
01045A	FE	11700.0000	UG/L	G	REW	8/13/93
01046A	FE DISS	11200.0000	UG/L	G	REW	8/13/93
01051A	PB	< 50.0000	UG/L	G	REW	8/18/93
01051Y	PB	< 4.0000	UG/L	G	BDM	8/24/93
01055A	MN	3020.0000	UG/L	G	REW	8/13/93
01056A	MN DISS	3020.0000	UG/L	G	REW	8/13/93
32730A	PHENOLS	94.0000	UG/L	G	EVC	8/11/93
70353	ORG HLDS	15.0000	UG/L	G	JHM	8/19/93

TOTAL NUMBER OF TESTS FOR THIS SAMPLE 19

COMMONWEALTH OF PENNSYLVANIA PAGE: 1
DEPARTMENT OF ENVIRONMENTAL RESOURCES

LABORATORY REPORT RECEIVED 8/11/93
FOR SAMPLE NUMBER H9347792 REPORTED 8/20/93

COLLECTOR	TOM MILLER SWH3	SAMPLING DATE	8/10/93
COLLECTOR NO.	2310339	SAMPLING TIME	12:15
ESTABLISHMENT	RAYMARK	STANDARD ANAL	236
CASE NAME	CME-93	TYPE CODE	
FACILITY	W-4	WQN	
ID CODE		STREAM CODE	
		RIVER MILE IND	

ST	DESCRIPTION		RESULT	CONC	VERIFY	BY	VERIFY DATE
00095	SPEC CONDUCT		1053.0000		G	MRD	8/12/93
00403	PH LAB		7.3000		G	HWS	8/11/93
00410	T ALK CACO3		338.0000	MG/L	G	HWS	8/11/93
00515	RES DISS/105		720.0000	MG/L	G	DHN	8/18/93
00680	C TOT ORGANC		2.8000	MG/L	G	WVH	8/12/93
00929A	NA		56.9000	MG/L	G	REW	8/13/93
00930A	NA DISS		55.3000	MG/L	G	REW	8/13/93
00940	CL		32.2000	MG/L	G	WVH	8/12/93
00945	SO4 TOTAL		132.0000	MG/L	G	WVH	8/12/93
01007A	BA		49.0000	UG/L	G	REW	8/13/93
01042A	CU TOT	<	10.0000	UG/L	G	REW	8/13/93
01045A	FE		284.0000	UG/L	G	REW	8/13/93
01046A	FE DISS		62.0000	UG/L	G	REW	8/13/93
01051A	PB	<	50.0000	UG/L	G	REW	8/13/93
01055A	MN		89.0000	UG/L	G	REW	8/13/93
01056A	MN DISS		68.0000	UG/L	G	REW	8/13/93
32730A	PHENOLS		0.0000	UG/L	G	EVC	8/11/93
70353	ORG HLDS	<	5.0000	UG/L	G	JHM	8/19/93

TOTAL NUMBER OF TESTS FOR THIS SAMPLE 18

COMMONWEALTH OF PENNSYLVANIA PAGE: 1
DEPARTMENT OF ENVIRONMENTAL RESOURCES

LABORATORY REPORT RECEIVED 8/11/93
FOR SAMPLE NUMBER H9347793 REPORTED 8/20/93

COLLECTOR	TOM MILLER SWM3	SAMPLING DATE	8/10/93
COLLECTOR NO.	2310340	SAMPLING TIME	9:30
ESTABLISHMENT	RAYMARK	STANDARD ANAL	236
CASE NAME	CME-93	TYPE CODE	
FACILITY	W-6	WQN	
ID CODE		STREAM CODE	
		RIVER MILE IND	

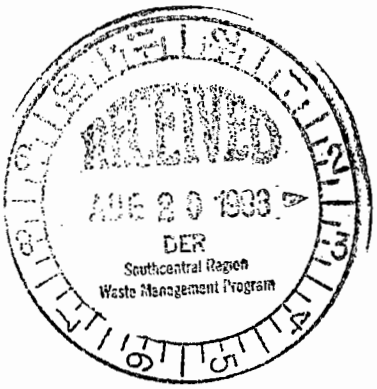
TEST	DESCRIPTION	RESULT	CONC	VERIFY	BY	VERIFY DATE
00095	SPEC CONDUCT	1971.0000		G	MRD	8/12/93
00403	PH LAB	7.1000		G	HWS	8/11/93
00410	T ALK CACO3	282.0000	MG/L	G	HWS	8/11/93
00515	RES DISS/105	2298.0000	MG/L	G	DHN	8/18/93
00680	C TOT ORGANC	1.9000	MG/L	G	WVM	8/12/93
00929A	NA	7.9800	MG/L	G	REW	8/13/93
00930A	NA DISS	7.7900	MG/L	G	REW	8/13/93
00940	CL	6.3000	MG/L	G	WVM	8/12/93
00945	SO4 TOTAL	960.0000	MG/L	G	WVM	8/12/93
01007A	BA	25.0000	UG/L	G	REW	8/13/93
01042A	CU TOT	11.0000	UG/L	G	REW	8/13/93
01045A	FE	161.0000	UG/L	G	REW	8/13/93
01046A	FE DISS	161.0000	UG/L	G	REW	8/13/93
01051A	PB	< 50.0000	UG/L	G	REW	8/13/93
01055A	MN	74.0000	UG/L	G	REW	8/13/93
01056A	MN DISS	66.0000	UG/L	G	REW	8/13/93
32730A	PHENOLS	0.0000	UG/L	G	EVC	8/11/93
70353	ORG HLDS	< 5.0000	UG/L	G	JHM	8/19/93

TOTAL NUMBER OF TESTS FOR THIS SAMPLE 18

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES

LABORATORY REPORT
FOR SAMPLE NUMBER H9347794

RECEIVED 8/11/93
REPORTED 8/20/93



COLLECTOR	TOM MILLER SWM3	SAMPLING DATE	8/10/93
COLLECTOR NO.	2310341	SAMPLING TIME	10:00
ESTABLISHMENT	RAYMARK	STANDARD ANAL	236
CASE NAME	CME-93	TYPE CODE	
FACILITY	W-7	WQN	
ID CODE		STREAM CODE	
		RIVER MILE IND	

TEST	DESCRIPTION		RESULT	CONC	VERIFY	BY	VERIFY DATE
00095	SPEC CONDUCT		749.0000		G	MRD	8/12/93
00403	PH LAB		7.5000		G	HWS	8/11/93
00410	T ALK CACO3		268.0000	MG/L	G	HWS	8/11/93
00515	RES DISS/105		548.0000	MG/L	G	DHN	8/18/93
00680	C TOT ORGANC		1.0000	MG/L	G	WVM	8/12/93
00929A	NA		10.8000	MG/L	G	REW	8/13/93
00930A	NA DISS		10.6000	MG/L	G	REW	8/13/93
00940	CL		11.6000	MG/L	G	WVM	8/12/93
00945	SO4 TOTAL		64.7000	MG/L	G	WVM	8/12/93
01007A	BA		48.0000	UG/L	G	REW	8/13/93
01042A	CU TOT		85.0000	UG/L	G	REW	8/13/93
01045A	FE		37.0000	UG/L	G	REW	8/13/93
01046A	FE DISS		10.0000	UG/L	G	REW	8/13/93
01051A	PB	<	50.0000	UG/L	G	REW	8/13/93
01055A	MN	<	10.0000	UG/L	G	REW	8/13/93
01056A	MN DISS	<	10.0000	UG/L	G	REW	8/13/93
32730A	PHENOLS		0.0000	UG/L	G	EVC	8/11/93
80353	ORG HLDS	<	5.0000	UG/L	G	JHM	8/19/93

TOTAL NUMBER OF TESTS FOR THIS SAMPLE 18

COMMONWEALTH OF PENNSYLVANIA PAGE: 1
DEPARTMENT OF ENVIRONMENTAL RESOURCES

LABORATORY REPORT RECEIVED 8/11/93
FOR SAMPLE NUMBER H9347795 REPORTED 8/20/93

COLLECTOR	TOM MILLER SWM3	SAMPLING DATE	8/10/93
COLLECTOR NO.	2310342	SAMPLING TIME	12:00
ESTABLISHMENT	RAYMARK	STANDARD ANAL	236
CASE NAME	CME-93	TYPE CODE	
FACILITY	W-9	WQN	
ID CODE		STREAM CODE	
		RIVER MILE IND	

TEST	DESCRIPTION	RESULT	CONC	VERIFY	BY	VERIFY DATE
00095	SPEC CONDUCT	538.0000		G	MRD	8/12/93
00403	PH LAB	7.6000		G	HWS	8/11/93
00410	T ALK CACO3	182.0000	MG/L	G	HWS	8/11/93
00515	RES DISS/105	372.0000	MG/L	G	DHN	8/18/93
00680	C TOT ORGANC	1.2000	MG/L	G	WVM	8/12/93
00929A	NA	15.8000	MG/L	G	REW	8/13/93
00930A	NA DISS	15.7000	MG/L	G	REW	8/13/93
00940	CL	39.5000	MG/L	G	WVM	8/12/93
00945	SO4 TOTAL	28.2000	MG/L	G	WVM	8/12/93
01007A	BA	36.0000	UG/L	G	REW	8/13/93
01042A	CU TOT	13.0000	UG/L	G	REW	8/13/93
01045A	FE	81.0000	UG/L	G	REW	8/13/93
01046A	FE DISS	20.0000	UG/L	G	REW	8/13/93
01051A	PB	50.0000	UG/L	G	REW	8/13/93
01055A	MN	19.0000	UG/L	G	REW	8/13/93
01056A	MN DISS	19.0000	UG/L	G	REW	8/13/93
32730A	PHENOLS	0.0000	UG/L	G	EVC	8/11/93
70353	ORG HLDS	6.1000	UG/L	G	JHM	8/19/93

TOTAL NUMBER OF TESTS FOR THIS SAMPLE 18

COMMONWEALTH OF PENNSYLVANIA PAGE: 1
DEPARTMENT OF ENVIRONMENTAL RESOURCES

LABORATORY REPORT RECEIVED 8/11/93
FOR SAMPLE NUMBER H9347796 REPORTED 8/20/93

COLLECTOR	TOM MILLER SWM3	SAMPLING DATE	8/10/93
COLLECTOR NO.	2310343	SAMPLING TIME	10:45
ESTABLISHMENT	RAYMARK	STANDARD ANAL	236
CASE NAME	CME-93	TYPE CODE	
FACILITY	W-10A	WQN	
ID CODE		STREAM CODE	
		RIVER MILE IND	

TEST	DESCRIPTION	RESULT	CONC	VERIFY	BY	VERIFY DATE
00095	SPEC CONDUCT	1611.0000		G	MRD	8/12/93
00403	PH LAB	7.2000		G	HWS	8/11/93
00410	T ALK CACO3	594.0000	MG/L	G	HWS	8/11/93
00515	RES DISS/105	2696.0000	MG/L	G	DHN	8/18/93
00680	C TOT ORGANC	10.0000	MG/L	G	WVM	8/12/93
00929A	NA	24.8000	MG/L	G	REW	8/13/93
00930A	NA DISS	24.8000	MG/L	G	REW	8/13/93
00940	CL	8.9000	MG/L	G	WVM	8/12/93
00945	SO4 TOTAL	1200.0000	MG/L	G	WVM	8/12/93
01007A	BA	70.0000	UG/L	G	REW	8/13/93
01042A	CU TOT	95.0000	UG/L	G	REW	8/13/93
01045A	FE	6100.0000	UG/L	G	REW	8/13/93
01046A	FE DISS	4500.0000	UG/L	G	REW	8/13/93
01051A	PB	50.0000	UG/L	G	REW	8/18/93
01055A	MN	2990.0000	UG/L	G	REW	8/13/93
01056A	MN DISS	2970.0000	UG/L	G	REW	8/13/93
32730A	PHENOLS	7.5000	UG/L	G	EVC	8/11/93
70353	ORG HLDS	7.6000	UG/L	G	JHM	8/19/93

TOTAL NUMBER OF TESTS FOR THIS SAMPLE 18

COMMONWEALTH OF PENNSYLVANIA PAGE: 1
DEPARTMENT OF ENVIRONMENTAL RESOURCES

LABORATORY REPORT RECEIVED 8/11/93
FOR SAMPLE NUMBER H9347797 REPORTED 8/20/93

COLLECTOR	TOM MILLER SWM3	SAMPLING DATE	8/10/93
COLLECTOR NO.	2310344	SAMPLING TIME	11:00
ESTABLISHMENT	RAYMARK	STANDARD ANAL	236
CASE NAME	CME-93	TYPE CODE	
FACILITY	W-10B	WQN	
ID CODE		STREAM CODE	
		RIVER MILE IND	

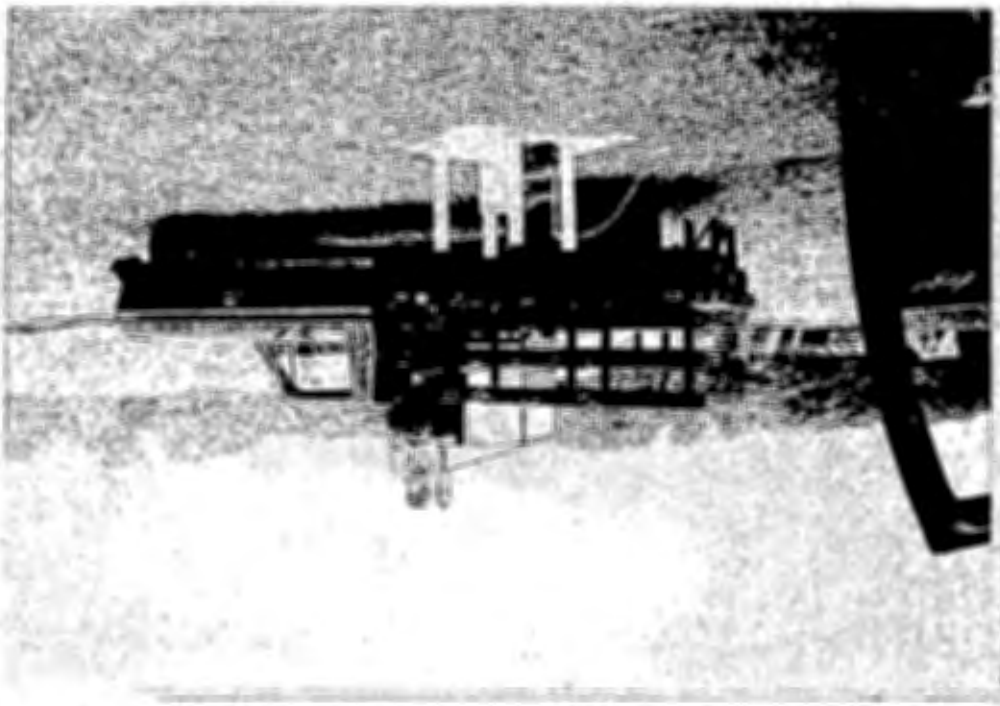
TEST	DESCRIPTION	RESULT	CONC	VERIFY	BY	VERIFY DATE
00095	SPEC CONDUCT	2472.0000		G	MRD	8/12/93
00403	PH LAB	7.7000		G	HWS	8/11/93
00410	T ALK CACO3	976.0000	MG/L	G	HWS	8/11/93
00515	RES DISS/105	2190.0000	MG/L	G	DHN	8/18/93
00680	C TOT ORGANC	11.5000	MG/L	G	WVM	8/12/93
00929A	NA	40.0000	MG/L	G	REW	8/13/93
00930A	NA DISS	40.0000	MG/L	G	REW	8/13/93
00940	CL	9.8000	MG/L	G	WVM	8/12/93
00945	SO4 TOTAL	695.0000	MG/L	G	WVM	8/12/93
01007A	BA	90.0000	UG/L	G	REW	8/13/93
01042A	CU TOT	< 10.0000	UG/L	G	REW	8/13/93
01045A	FE	12900.0000	UG/L	G	REW	8/13/93
01046A	FE DISS	10100.0000	UG/L	G	REW	8/13/93
01051A	PB	< 50.0000	UG/L	G	REW	8/13/93
01055A	MN	2060.0000	UG/L	G	REW	8/13/93
01056A	MN DISS	2060.0000	UG/L	G	REW	8/13/93
32730A	PHENOLS	12.5000	UG/L	G	EVC	8/11/93
70353	ORG HLDS	6.3000	UG/L	G	JHM	8/19/93

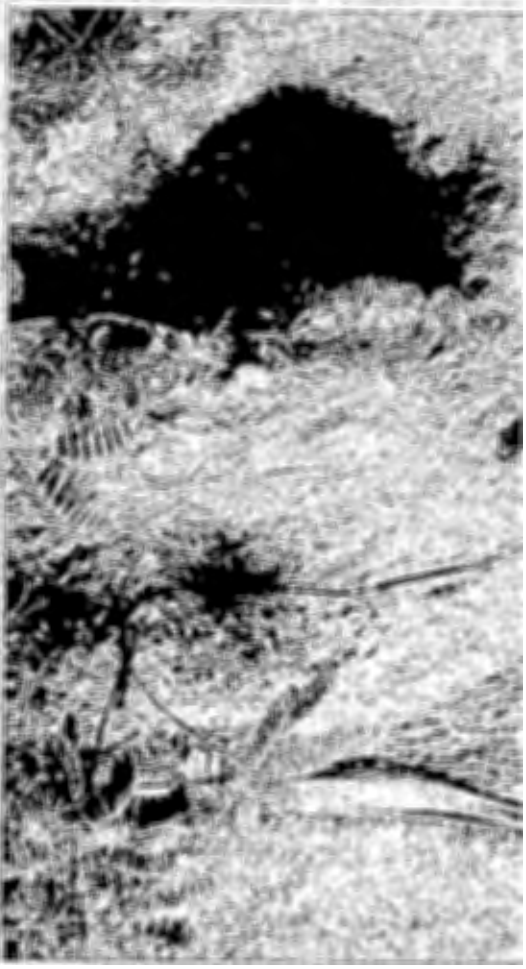
TOTAL NUMBER OF TESTS FOR THIS SAMPLE 18

Raymark 8/10/93

Material ejected from animal burrow - N. side landfill.

Note green bones.





ER-WM-129: Rev. 12/88

Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Waste Management

RECEIVED
OCT - 5 1992
DIV. OF ENFORCEMENT

Inspection Report Comments

Date of Inspection 9/23/92 Identification Number PAD003015328

Company/Facility/Site Name Raymark Industries 123 E. Strieglest. Morkeim, PA

Glenn Mitzel and Randy Weiss from the Department conducted an land-disposal inspection with Jameson Showers and Bruce Keefer at the facility. This facility is still in the process of closure. The Department has recently (July 1992) approved the "1991 Landfill Closure and Post-Closure Plan" (Revised April 1992). Raymark Industries must now proposition Bankruptcy Court to allow for the monies to close the landfill.

The inspection revealed the following:
1. Small erosional areas were noticed on the North Section of the "interim-stabilized" landfill.
2. Water ponding was noticed along stone drive on North perimeter
3. Vegitative growth was sparse.

The Department recommends that these areas be stabilized and re-vegitated within thirty (30) days.

In the "Requirement" Section of this inspection report, each listed inspection item may provide only a brief version of its corresponding obligation as described in the body of the regulations. Please use the Chapter citations listed on this inspection report as a reference to obtain a detailed description of compliance requirements.

This inspection report is official notification that a representative of the Department of Environmental Resources, Bureau of Waste Management, inspected the above installation. The findings of this inspection are shown in this report. This inspection report shall serve a formal notification of any violations which were observed during the inspection. Violations may also be discovered upon examination of the results of laboratory analyses and review of Department records. Additional notification may be forthcoming, concerning any violations indicated herein and listing any additional violations.

This report does not constitute an order or other appealable action of the Department. Nothing contained herein shall be deemed to grant or imply immunity from legal action for any violation noted herein.

Signature by the person interviewed does not necessarily imply concurrence with the findings on this report, but does acknowledge that the person was shown the report or that a copy was left with the person.

Person Interviewed (signature) Glenn W. Mitzel Date 9/30/92

Inspector (signature) mailed to facility Date

TSD E.P.A. 4/91

EVALUATION - VIOLATION - ENFORCEMENT FORM I

HANDLER — Date Submitted

) Number: PAD003015328 | LDF[✓] TSF[ ] INC[ ] LOG[ ] SOG[ ] TRA[ ] | 09/19/91

Handler Name: Raymark Industries

Street: 123 E. STIEGEL ST.

City: Manheim, PA 17545

EVALUATION — Add [X] Change [ ] Delete [ ]

Date	Number	Agency	Type	Reason	Branch	Person
09/16/91		S	CES			

Areas of Evaluation (E - Evaluated, NE - Not Evaluated, NA - Not Applicable)

	GOR	TGR	DCM	DGW	DMC	DPP	CAS	
	GPT	TMR	DCL - E	DIN	DMR	DSI	FEA	
GGR	GRR	TOR	DCP	DLB	DOR	DTR		
GLB	GSC		DFR	DLF		DTT		
GMR	GSQ	TWD	DGS	DLT	DPB	DWP		

)

Comments: Land disposal facility inspection (closure)

VIOLATION — Add [ ] Change [ ] Delete [ ]

ncy	Number	Area	Class	Regulation Type	Regulation Citation
]					

Date Determined	Priority	Branch	Person	Returned to Compliance Scheduled	Returned to Compliance Actual

mments

VIOLATION — Add [ ] Change [ ] Delete [ ]

ncy	Number	Area	Class	Regulation Type	Regulation Citation
]					

Date Determined	Priority	Branch	Person	Returned to Compliance Scheduled	Returned to Compliance Actual
)					

mments

VIOLATION — Add [ ] Change [ ] Delete [ ]

ncy	Number	Area	Class	Regulation Type	Regulation Citation
]					

Date Determined	Priority	Branch	Person	Returned to Compliance Scheduled	Returned to Compliance Actual

mments

VIOLATION — Add [ ] Change [ ] Delete [ ]

ncy	Number	Area	Class	Regulation Type	Regulation Citation
]					

Date Determined	Priority	Branch	Person	Returned to Compliance Scheduled	Returned to Compliance Actual

mments

equired = [ ] Required if pertinent = [ ] Required only for previously reported data = [ ] Not Required by EPA

EVALUATION - VIOLATION - ENFORCEMENT FORM II

ID Number | Handler Name

VIOLATION
Add | Change | Delete

Agency ■ Number ¤ Area ■ Class ■ Regulation Type Regulation Citation

Date Determined ▲ Priority Branch Person Returned to Compliance Scheduled ▲ Actual ▲

Comments

VIOLATION
Add | Change | Delete

Agency ■ Number ¤ Area ■ Class ■ Regulation Type Regulation Citation

Date Determined ▲ Priority Branch Person Returned to Compliance Scheduled ▲ Actual ▲

Comments

VIOLATION
Add | Change | Delete

Agency ■ Number ¤ Area ■ Class ■ Regulation Type Regulation Citation

Date Determined ▲ Priority Branch Person Returned to Compliance Scheduled ▲ Actual ▲

Comments

ENFORCEMENT
Add | Change | Delete

Date ■ Number ¤ Agency ■ Type ■ Branch Person

Penalty Assessed ▲ Settled ▲

COVERED VIOLATIONS

Agency ▲	Number ▲	Area ▲	Agency ▲	Number ▲	Area ▲	Agency ▲	Number ▲	Area ▲

PENALTY PAYMENTS

Date	Amount	Date	Amount

Comments

Required ■ | Required if pertinent ▲ | Required only for previously reported data ¤ | Not Required by EPA

ER–WM–129: Rev. 12/88

Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Waste Management

Inspection Report Comments

Date of Inspection 9/16/91 Identification Number PAD003015328

Company/Facility/Site Name Raymark Industries (Closed landfill)

Glenn Mitzel from the Department conducted a landfill closure inspection at the former Raymark Industries landfill. Landfilling ceased on the property on ~~Feb~~ March 19, 1987. A closure plan was submitted on April 24, 1987 by Raymark, but was determined not to meet the intent of 25 Pa Code 75.264(6)(2)(i) on (ii) by the Department. On July 31 1989 the Department ordered Raymark to take interim steps to effectively secure all exposed landfill material to prevent the material from becoming airborne (and to limit run-off). The exposed part of the landfill was covered by November 1989 (northeast of the Tennis Courts) and reseeded.

On inspection on September 16, 1991 noted the following:
- Vegitative cover on landfill is sparse. The Department recommends reseeding this area within thirty (30) days. Some small erosion (<6") gullies were noticed. Vegitative cover should be cut this fall to prevent woody plant material.
- Parts of the old landfill area ajacent to the railroad tracks (Chickie creek side), in the "Coal Storage Area, are exposed. Waste material including brake linings, clutches, fabric

In the "Requirement" Section of this inspection report, each listed inspection item may provide only a brief version of its corresponding obligation as described in the body of the regulations. Please use the Chapter citations listed on this inspection report as a reference to obtain a detailed description of compliance requirements.

This inspection report is official notification that a representative of the Department of Environmental Resources, Bureau of Waste Management, inspected the above installation. The findings of this inspection are shown in this report. This inspection report shall serve a formal notification of any violations which were observed during the inspection. Violations may also be discovered upon examination of the results of laboratory analyses and review of Department records. Additional notification may be forthcoming, concerning any violations indicated herein and listing any additional violations.

This report does not constitute an order or other appealable action of the Department. Nothing contained herein shall be deemed to grant or imply immunity from legal action for any violation noted herein.

Signature by the person interviewed does not necessarily imply concurrence with the findings on this report, but does acknowledge that the person was shown the report or that a copy was left with the person.

Person Interviewed (signature) James R. Shower Date 9/16/91

Inspector (signature) Glenn W. Mitzel Date 9/16/91

ER–WM–129: Rev. 12/88

Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Waste Management

Inspection Report Comments

Date of Inspection 9/16/91 Identification Number PAD003015328

Company/Facility/Site Name Raymark Industries (Closed landfill)

etc can be seen on the surface and along the edges. The landfill is also exposed along the edge of the asphalt ~~road~~ leading to the meadow area. These areas will have to be adressed as part of the Consent Adjudication being worked on between the Department and Raymark. This Consent Adjudication (if agreed upon and approved by Bankruptcy Court) will encompass the closure of the landfill.

In the interim, the Department recommends that Raymark take appropriate measures to limit the run-off from the exposed landfill (especially near the Coal Storage Area (former)) and to prevent possible airborne emissions. Please respond to the Department in writing within ten (10) days with how Raymark will correct this area.

In the "Requirement" Section of this inspection report, each listed inspection item may provide only a brief version of its corresponding obligation as described in the body of the regulations. Please use the Chapter citations listed on this inspection report as a reference to obtain a detailed description of compliance requirements.

This inspection report is official notification that a representative of the Department of Environmental Resources, Bureau of Waste Management, inspected the above installation. The findings of this inspection are shown in this report. This inspection report shall serve a formal notification of any violations which were observed during the inspection. Violations may also be discovered upon examination of the results of laboratory analyses and review of Department records. Additional notification may be forthcoming, concerning any violations indicated herein and listing any additional violations.

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Signature by the person interviewed does not necessarily imply concurrence with the findings on this report, but does acknowledge that the person was shown the report or that a copy was left with the person.

Person Interviewed (signature) James R. Shaver Date 9/16/91

Inspector (signature) Glenn W. Mitzel Date 9/16/91

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
Post Office Box 2063
Harrisburg, Pennsylvania 17105-2063

Bureau of Waste Management

November 15, 1990

John Nevius
Environmental Protection Agency
RCRA Enforcement Section 3HW62
841 Chestnut Building
Philadelphia, PA 19107

Dear John:

Enclosed are two CME groundwater monitoring reports:

Raymark Industries, Inc. ... Harrisburg Region ... by T.J. Miller *
Vogel Disposal Service, Inc. ...Meadville Region... by Craig Lobins and Kim Kaal

This should be the last package of groundwater inspection reports for FFY 1990. If you have any questions, please do not hesitate to call.

* John, this one should be worth 2 (two) beans.

Sincerely,

Bill Rarick

Bill Rarick